Discover your future in science, technology, engineering and mathematics

Undergraduate Guide
Forest Stewardship Council® (FSC®) is a globally recognised certification overseeing all fibre-sourcing standards. It provides guarantees for the consumer that products are made of woodchips from well-managed forests, other controlled sources and reclaimed material with strict environmental, economic, and social standards.
“Innovation distinguishes between a leader and a follower.”

Steve Jobs (1955–2011)
Entrepreneur, Inventor, co-founder, chairman and chief executive of Apple Inc.
Discover
Why study STEM?

Science, technology, engineering and mathematics (STEM) are fundamental to our lives. Who can imagine a world without modern transport, medicines, Wi-Fi and smartphones? All these were created thanks to the fields known collectively as STEM.

STEM is about more than fancy gadgets and medical innovations. It embodies a way of questioning, testing and analysing that enables you to draw conclusions based on evidence. A way of thinking about the world that will benefit you in far-reaching ways beyond the specific disciplines of science, technology, engineering and mathematics.

STEM is responsible for the great innovations that make our world better. Research reveals that 75 percent of the fastest growing occupations require STEM skills and knowledge* and a degree in these areas will prepare you for careers in global scientific, technological and engineering revolutions.

You can study areas as diverse as nanoscience, molecular biology, robotics, biomedical engineering and computing.

With major technological advances opening up many new areas, from ecosystems to nanotechnology, there has never been a more fascinating time to study STEM.

– sydney.edu.au/stem

*Australian Industry Group research report: Lifting our Science, Technology, Engineering and Mathematics (STEM) Skills.
Discover
Why study with us?

Studying science, technology, engineering or mathematics (STEM) enables you to tackle the biggest issues facing the world today – and into the future.

We’ve taught Australia’s first astronaut, an Antarctic explorer, a chief scientist and a Nobel laureate. When you study STEM at Sydney, you will learn critical thinking and evaluation, and how to put forward a logical argument.

We will also help you develop the skills and instincts to challenge ideas and demand quality evidence before accepting what you hear – traits that will enable you to succeed regardless of the career you choose.

Study STEM at a highly ranked university
The University of Sydney is:

− ranked first in Australia and 11th in the world for veterinary science, in the top 50 in the world for engineering and technology, and natural sciences, and ranked 19th in the world for our life sciences and medicine disciplines by the QS World University Rankings

− the top-ranked institution in Australia for scientific research output, as determined by the SCImago Institutions Rankings World Report, for the past six years.
Flexible options
If you would like to study STEM subjects at university, but are worried about making the ATAR cut-off, don’t worry. Our Flexible Entry program considers your ATAR as well as your performance in maths and science subjects and, for engineering and IT, your leadership capability.

If you’re not sure in which area of engineering or IT you’d like to specialise, our Flexible First Year program gives you the time and freedom to discover where your strengths and interests lie before deciding. You can start your degree with the program then transfer, either at the end of your first semester or at the end of your first year, to one of the many specialisations we offer. You will still complete your degree in the normal time and be a fully qualified graduate in the area of your choice.

Our science degrees also allow a great deal of flexibility, so you can decide on your subjects and majors as you go along in most programs. There are more than 30 majors across our three science faculties from which to choose, so you have the freedom to explore the breadth of science and find which area you are most passionate about.

You can also broaden your career options with a combined degree – a program of study that allows you to graduate with two degrees. Combined degrees are usually five years in length and very popular, as they allow you to combine a range of interests.

For more information about combined degree options refer to the course tables (pages 33 to 40).

“I did Flexible First Year and I’d really suggest this to anyone who wants to do engineering. It gives you the opportunity to try out different types of engineering then make a decision.”

Kate McDonell
Civil engineering student

Globally recognised qualifications
Our degrees are accredited by the relevant professional bodies and you will graduate with globally recognised qualifications, making you highly sought after by employers all over the world.

Scholarships
At the University of Sydney, we offer more than 500 University-wide scholarships to undergraduates every year. In the areas of science, agriculture and environment, veterinary science, engineering and IT, we offer additional scholarships specifically for students pursuing STEM disciplines. For example, our Engineering Leadership Scholarships are some of the most valuable engineering undergraduate scholarships in Australia – providing $18,000 a year along with leadership development throughout your degree.

For more information about scholarships visit – sydney.edu.au/scholarships
If you’re considering studying science or engineering, you’re probably wondering what job you might get. You’ll have a huge range of careers to choose from when you graduate and the numbers are on your side: 75 percent of the fastest growing occupations now require STEM skills and knowledge. That means your prospects for future employment are bright.
Careers in research

There are no limits to what you can do as a researcher. If you can imagine something to investigate, then you can build a career doing it. You could, for example, work in the field of astronomy, investigating our universe and revealing its fundamental features. Australia has an outstanding reputation in this field – many world-leading astronomers work here and various exciting projects are underway.

You could apply your software engineering knowledge to design systems that support mental health, medicine and education – known as the emerging field of positive computing.

Another rapidly expanding area is materials science and materials engineering, which involves analysing materials and creating new ones that can be used in a variety of applications. With Australia ranked highly for materials science, this area promises a huge range of career opportunities.

Professor Marcela Bilek
Materials Scientist, the University of Sydney

Marcela’s research helps develop biomaterials that can be used safely in humans.

“I had a desire to see my work applied to the benefit of humanity. The fact that new materials play a major role in driving new technologies led me to choose materials research.”
Careers in food

Want to help solve the world’s problems and be guaranteed a job? Then your ideal career may be in the thriving sectors of food and agriculture. You can help feed the world sustainably in the face of a changing climate.

You may also become a pioneer in emerging areas such as carbon or water trading, or managing Australia’s natural resources. You could be employed with a commodities group, bank, local or international agribusiness, or government department.

You could work as an adviser, economist, scientist, teacher, trader, in policy, or as a marketer or communicator for the food industry.

As a scientist or engineer, you could design production processes that improve the quality and shelf life of our food, or develop robots with intelligent software to weed and harvest crops autonomously.

Whatever you choose, you can expect a career rich in options, challenges and rewards.

Ben Smider
Senior Grower, Flavourwave, Victoria

“Once you have a solid grounding in science, it’s much easier to understand and develop the practical aspects in the workplace, and that’s what the University of Sydney gave me.”

Ben completed his bachelor’s degree in the Faculty of Agriculture and Environment and believes that a strong science foundation gave him an excellent start to a career in the food industry.
Careers in health

A medical degree is not the only way to a rewarding career in improving individual and community health. Science underpins medical and health-related fields, so a Bachelor of Science is a stepping stone to gaining work in this sector.

A Bachelor of Medical Science could lead you to work in a laboratory researching diseases or in a hospital running clinical trials.

Biomedical engineering is one of the fastest growing branches of engineering. It could see you working alongside clinicians and medical professionals to design and develop medical devices and implants.

A Bachelor of Psychology will enable you to work on aspects of human behaviour through research, private practice or large organisations.

A science degree with a major in nutrition and metabolism could be your first step towards a career as a nutrition researcher or as a dietitian who plans food and nutrition programs and promotes healthy eating habits.
Careers in the corporate world

Many corporate high achievers get their start in science, engineering and IT – qualifications known to offer a leading edge. Graduates with science and engineering training are highly sought after in the fields of finance, banking and insurance, because of their numeric skills, particularly in model-based and applied mathematics, as well as their problem-solving abilities.

You will gain many skills in your studies that will be beneficial in careers across the business, management, government, defence and legal sectors. Strong abilities in logical reasoning and complex data analysis, for example, mean many science and engineering graduates are snapped up by employers in the popular area of management consultancy.

Qualified project managers are also sought after in professional and management roles due to their transferable skills and ability to help organisations deliver new products, services and infrastructure.

John DeNavi
Engagement Manager, Heidrick & Struggles

John has taken the invaluable complex problem-solving abilities he gained through his aeronautical engineering degree into the exciting world of leadership consulting and executive search. “My studies have enabled me to progress along a career path by bringing a different skill set [to those] traditionally hired within the firm,” he says.
Lindsay Soutar
Founder of Solar Citizens, and previously founded 100% Renewable Community Campaign

Lindsay’s passion for environmental sustainability started at university, where she completed honours in geography. After university, she started the 100% Renewable Community Campaign, for which she won the 2011 Environment Minister’s Young Environmentalist of the Year Award. She recently founded Solar Citizens, a community project to bring together existing and future solar owners to ensure their rights are protected. Lindsay gets enormous satisfaction from “working on one of the most challenging and fastest-changing areas of public decision making and on a really important global issue that I care deeply about.”

Humanitarian and sustainability careers

Science has always been a vehicle for improving our world, but a science or engineering degree can also be a launch pad for working with people and places most in need. If protecting the world’s threatened species and magnificent habitats is your priority, a degree in science, environmental systems, or veterinary science would be essential.

To work in Australia’s rapidly growing and hugely important water industry, you will need qualifications in either science or engineering. Sustainability is a growing field, with many major companies hiring environmental engineers, or sustainability and corporate responsibility managers to maximise the eco-efficiency of their businesses.
Careers in education, communications and media

Do you enjoy studying science, but love telling people about it even more? Many jobs in education and media need passionate experts to inspire and inform people about the hugely important disciplines of science, mathematics and engineering.

If you’re interested in teaching, you can work in schools or beyond the classroom in educational facilities such as museums, zoos and science centres. If you enjoy engaging audiences in creative and diverse ways, you could look to the media, marketing and communications sector. Careers include science journalism across media outlets in print, online, radio or TV. Another popular role is a communications officer in a science or engineering institute. This role involves promoting the work done in the facility to the public.

Derek Muller
Engineer, scientist, TV presenter and creator of YouTube Channel Veritasium

Derek created popular YouTube channel Veritasium after studying engineering physics in Canada followed by a PhD in Physics Education Research at the University of Sydney.

“Engineering and science are incredibly flexible degrees. They teach you how to think critically and solve problems — skills that can be applied across a variety of disciplines to create solutions to the challenges the world faces today, and to help shape the world of tomorrow. I think they are an excellent foundation for a diverse range of pursuits.”
Careers in mining and resources

A career in mining and resources means working in one of Australia’s most technologically advanced and dynamic industries. The sector currently employs about 254,000 people in Australia.

Most employers in mining and resources prefer graduates with specialised university degrees such as engineering (civil, mechanical, mechatronic), geoscience (geophysicist, resource geologist) and environmental science.

This industry is the largest employer of environmental professionals in Australia today.

Dr Michael Petrozzi
Managing Director, Macquarie Drilling

A bachelor’s degree with honours in geoscience, followed by a PhD in geoscience, gave Michael the skills and industry connections to forge a career in mining services. After setting up and selling his own consulting company, he now owns and runs Macquarie Drilling.
Careers in tomorrow’s technologies

Photonics, optics, quantum technology, data analytics, space engineering, software and nanotechnologies are at the cutting edge of these technology sectors, and undergraduate degrees in science, IT or engineering can lead to a career in these fields.

If you’re trained in chemistry, engineering, physics, computer science or materials science, you could work as a nanotechnologist, for example. The federal government considers nanoscience to be such an important field that it helped fund the Australian Institute for Nanoscale Science and Technology at the University of Sydney.

If you graduate with expertise in biomedical engineering, IT or life sciences, you can find rich career options in the biotechnology sector, where more than 1500 diagnostic, medical and therapeutic companies have created more than 40,000 jobs in Australia.

Dr Joseph Bevitt
Scientific Coordinator, Australian Nuclear Science and Technology Organisation’s Bragg Institute

Joseph uses advanced technology every day at work. He manages the access process for scientists around the world to use the neutron scattering facilities on Australia’s only nuclear reactor. His Bachelor of Science (Advanced) (Honours) and PhD in chemistry gave him the skills to take on this important job.
Become an entrepreneur

No matter which area of STEM you choose to focus your studies on, you can combine them with your entrepreneurial drive to launch something exciting.

Many of our students take advantage of the accelerator and support programs at university to come up with innovative business ideas. A recent survey by Startup Muster revealed more Australian start-up founders studied at the University of Sydney than any other Australian university. We support you through programs such as the Sydney Accelerator Network and Incubate, to help get your ideas up and running.

James Alexander
Co-founder, Incubate

While studying for a Bachelor of Computer Science and Technology, James co-founded Incubate, an award-winning startup accelerator and entrepreneur program.

“I chose Sydney for its fantastic reputation in computer science and IT research, and teaching. With support from the University of Sydney Union and the University, I co-founded Incubate, a program that helps foster entrepreneurial students and get start-up businesses off the ground – it’s the first of its kind in the Asia-Pacific region.”
Careers in engineering

Engineers develop innovative, creative and sustainable solutions that promote positive change worldwide. A career in engineering could take you anywhere, from developing space robotics to designing offshore pipelines, integrating renewable energy into our power supply, improving pharmaceutical delivery, managing construction of critical infrastructure or developing software to improve people’s lives.

Andrew Tanner
Bachelor of Commerce (Business), Bachelor of Engineering (Mechanical) (Honours), 2004
Global Executive MBA, 2014

Developing solar power technology that is revolutionising the way we harvest the sun’s energy is among several reasons why University of Sydney engineering and business alumnus Andrew Tanner was awarded the 2014 Advance Global Australian of the Year Award for Clean Technology. Andrew is now Vice President of Business Development at Growing Energy Labs, Inc., which develops software to integrate, network and operate energy storage systems economically.
Become a veterinarian or work with animals

With the highest incidence of pet ownership in the world and advanced application of technology to livestock breeding, Australia has a thriving veterinary and animal industry. And while becoming a vet in private practice is a great career, there are many other equally rewarding options for animal science graduates who love working with animals.

Vets work in animal production, wildlife ecology or research on almost any animal imaginable. For a different route, a degree in animal sciences could see you working in pharmaceuticals, government services, zoos, artificial breeding, natural resource management, management of invasive animals, medical research, teaching at various levels in education, or working as an animal nutritionist – just to name a few.

Robert Johnson
Official Veterinarian, Royal Agricultural Society

As a vet, Robert sees more than just dogs and cats. He runs a small animal, wildlife and reptile private practice, is a clinical veterinarian at Taronga Zoo – treating anything from elephants to echidnas – and is President of the Unusual and Exotic Pets Group.
Innovative learning environment

Our labs, teaching spaces and learning hubs are designed to help you get the most out of your learning experience. They incorporate the latest technology and equipment and allow interactive study, research and collaboration.

Some of our first-rate facilities include:

- **Raymond Kirby Robotics Teaching Lab**
  This lab is equipped with the latest robotic and microcontroller-based hardware and software. Its centrepiece is a 180 centimetre tall humanoid robot called Baxter that assists students learning to program robots for industrial and other tasks.

- **Sydney Invention Studio**
  This studio can help you turn your ideas into reality. You can access 3D-printing technology, laser cutters, electronics testing and other machinery to develop and manufacture prototypes.

- **Centre for Carbon, Water and Food**
  Our population is growing and our planet is changing. This centre is dedicated to solving food and environmental issues. Opened in 2013, the centre’s purpose-built facility is located in the rural Sydney suburb of Camden.
- **Australian Institute for Nanoscale Science and Technology**
  Opened in 2015, this is the only facility of its type in the southern hemisphere. It is the nation’s first single institute at which students and academics can devise, fabricate, test and deploy new science at the nanoscale. The institute includes the highest performing nanoscience facilities in the Asia-Pacific region, from a high-calibre cleanroom for making nanodevices to measurement laboratories and pioneering teaching spaces.

- **Charles Perkins Centre**
  The Charles Perkins Centre brings together experts from various disciplines to study and control the modern epidemics of obesity, diabetes and cardiovascular disease, and related conditions. At the centre’s heart is a $385 million dollar research and education hub in which 1500 students and 900 researchers collaborate.

- **IA Watson Grains Research Institute**
  The biggest centre of its kind in Australia, this institute is finding better ways to grow cereals, pulses, beans and peas. Owned by the University and located in Narrabri, NSW, the institute spans 2268 hectares. Through this facility, we offer you unparalleled opportunities to learn about sustainable grain production.

**Investing in your future**

We’re committed to creating a place where ideas and innovations flourish.

The Engineering and IT precinct is undergoing a multimillion-dollar revitalisation project that will provide an environment in which our leading researchers and students can thrive and realise their full potential. The project will include new multidisciplinary learning and research spaces that reflect our culture of innovation and scholarship.

Our plans for a new life, earth and environmental sciences facility will bring together scientists like never before. For the first time, students and researchers from diverse faculties will work and learn together in a single, ultra-modern complex. It will foster multidisciplinary collaboration that will lead the way forward to an exciting new era of education and research.
At Sydney, we take your university experience beyond the lab and lecture theatre. We know that the more engaged you are with extracurricular activities and the more you enjoy your time here, the better you’ll do in your studies. We offer plenty of events and activities to help you get the most out of your time with us.

Making the transition
Our programs begin connecting you to classmates, academic staff and valuable advice before classes begin, so that you’re well prepared from day one.

For science students, the transition program kicks off with the Science Students’ Transition Workshop – a one-day event held in late February just before Orientation Week. Once semester begins, you can find more support at SLAM (Science Link-Up and Mentoring) lunches.

During O-week you can also join introductory programs, welcomes and facilities tours with all our STEM faculties.

Student societies
Student societies play an invaluable role in enriching your university experience, and there are more than 200 to choose from. Whether you like chess, chocolate, juggling or something a little more academic, there is a society of like-minded people waiting for you. You can build lifelong friendships as well as professional networks that can open doors for you later in life.

Whichever course you choose to study, there will be a related society for you to join. To find out more about the clubs and societies on campus, visit:

**Hands-on opportunities**
As part of our student community you’ll have the opportunity to get involved in any number of exciting projects or invent creative solutions.

You may choose to work with local communities, either as part of your course or in your own time as a volunteer with one of our outreach programs, such as Engineers Without Borders.

You may like to become a student mentor, tutor or ambassador. Ambassadors let young potential students know about the possibilities in higher education, and promote STEM education both on and off campus.

However you choose to get involved, you’ll be doing it within a group of students who are all interested in making a genuine difference within our own community and beyond.

**Career workshops and fairs**
Most students start university wondering where their degree will take them. We will help you discover the exciting jobs available with a range of special career programs.

For example, Jumpstart Your Career science events bring together academics and industry leaders to discuss jobs across different sectors – and how to get them.

We hold annual careers fairs where you have the opportunity to discuss graduate programs, employment options, internships, vacation work and placements with industry professionals who specialise in your chosen stream of engineering, IT or project management.

The University also offers other networking sessions, workshops and other forums where you can meet prospective employers and seek advice on your career path.

– sydney.edu.au/careers
If you are wondering where in the world studying STEM can take you, just look at some of the exciting global projects our students work on.

Do you love tropical ecology and want to study international rainforests? Maybe you’ve got your eyes set on high tech and want to create networks in Silicon Valley. Or would you just like to get out of your comfort zone for a semester? Taking part in an international placement, internship, exchange or study abroad program is an exciting and challenging way to broaden your horizons. A study abroad experience through Sydney will give you a passport to discovery.

**Study abroad**
We offer study opportunities with more than 300 universities in 35 countries. There is even a $5000 science undergraduate exchange scholarship to help you get there.

**International specialisation**
The International Specialisation program allows students studying science in agriculture, environmental systems or food and agribusiness to take subjects that are continuous with their degree at universities in Europe and Asia.

---

Our Sydney Lunabotics team travelled to the Kennedy Space Center in the US to compete in the NASA Lunabotics Mining Competition. In 2013, Sydney Lunabotics became the highest ranked international team and achieved the highest rank for any first-time competitor.

Aeronautical engineering PhD candidate Ben Morrell is undertaking research into advanced control systems for robotic spacecraft at Texas A&M University. He is working with researchers at the Land, Air and Space Robotics (LASR) Lab and the Massachusetts Institute of Technology and, later, with NASA Johnson Space Center.

Students Catherine Goonan and Andrew Yeo undertook a humanitarian-aid project, Water for Life Peru, as part of their civil engineering honours degree. Their simple systems allow water droplets in fog to be collected into a storage tank. The pair worked with a community team, using only local materials to create prototypes.
For more than 20 years, Associate Professor Robyn Alders, from the Faculty of Veterinary Science, has worked in African and Asian countries to develop sustainable models for the control of the devastating poultry virus known as Newcastle disease. Her work supports improved poultry health and household food and nutrition security.

Undergraduate geology students visit Tibet regularly to study the geological evolution of the Himalayas.

Laura Craft, a combined architecture and civil engineering student, participated in the ‘MADE by the Opera House’ program between Australia and Denmark. A collaboration between the Sydney Opera House and the Royal Danish Academy of Fine Arts, Laura worked with internationally renowned Henning Larsen Architects.

David Coleman and Michaela Mei Dolk, both studying the Bachelor of Environmental Systems, and Ming Jie Pan, studying a Bachelor of Psychology, are some of the first students to win prestigious New Colombo Plan funding from the federal government to travel to Asia to study in 2015.

Each year our physics and chemistry students travel to Nanjing University in China to conduct research projects relevant to their area of interest. Their Chinese research experience is entirely funded by the universities and the students get to host Nanjing University students in Sydney the following year.

A team of marine robotics students and researchers worked with archaeologists on location at Pavlopetri, the oldest known submerged city, which lies off the coast of Greece’s southern Laconia region. The team’s work involved 3D mapping and digitally reconstructing the submerged city using underwater vehicles fitted with a special camera system and specialised software.
Study
Agriculture and Environment

Our graduates are professionals who can produce food sustainably and manage our environment.

Explore your opportunities
Our highly respected degrees mean many of our students are offered jobs before they even graduate.

As one of these graduates, you will enter a thriving job market. Your highly sought-after skills will open the door to many exciting career choices, including biosecurity, biotechnology, commodities trading, environmental science, and crop production and protection.

Studying in the Faculty of Agriculture and Environment will prepare you to get the most out of these opportunities. You will be taught by industry and research leaders in courses that address the most important issues of our time, such as climate change and how to feed the world sustainably.

Take a global view
The Faculty of Agriculture and Environment gives you the opportunity to complete part of your degree at some of the world’s best universities through our international specialisation.

Available for undergraduates enrolled in all three degrees in the faculty, this new specialisation will give you the international experience to take on the global challenges of today and tomorrow.

Join a thriving faculty
We are proud to be building some of the best facilities of any comparable faculty in Australia. In 2013, we opened our Centre for Carbon, Water and Food – the first of its kind in the nation – in Camden, on the outskirts of Sydney. And in 2015, our IA Watson International Grains Research Centre at Narrabri, on the north-west slopes of NSW became the largest regional grains research centre in the country.

This is why we’re Australia’s top agricultural faculty, with a score of five out of five from the federal government’s Excellence in Research for Australia ratings. We’re the leader in terms of research output, growth and expansion, and among the best places to gain qualifications in agricultural and environmental sciences.

Daphne Sun
Bachelor of Food and Agribusiness student

By studying in the Bachelor of Food and Agribusiness, Daphne hopes to go into business developing her own food products.

“Maybe it will be tasty and super popular, or maybe it will be a ‘super meal’ that can help alleviate world hunger.”

Andrew McDonald
Export Sales Manager, NipponHam Foods Australia

Andrew believes studying in the Faculty of Agriculture and Environment prepared him best for his job as an international beef trader.

“The job description pretty much ticked every box of what I did at university and what I liked.”
Science opens your eyes to the marvels of our planet and gives you the tools to make it a better place.

**Fascinating and fulfilling**

What could be more fascinating – or important – than unravelling the complexities of our world while helping to create a more advanced society? Last year alone scientists landed a spacecraft on a comet for the first time, pinpointed the source of the ebola outbreak in West Africa, and taught robots to cooperate without human help.

Science is one of the most inherently fascinating and fulfilling disciplines available, opening doors to lines of enquiry limited only by your imagination. Science is also crucial to our future, and is the basis for innovations that improve lives, from new drugs for curing diseases to smaller and smaller computers.

With new technologies being developed every day, the pace of scientific discovery has never been greater, so there has never been a better time to be part of this exciting discipline.

**Top-ranked science faculty**

We are Australia’s number one science faculty for scientific output – we have been ranked first in Australia by SCImago Institutions Rankings for the past six years.

We produce more scientific discoveries than any other university in Australia.

Our teaching is shaped by this high-level research, so our graduates leave with the skills and experience to work at the leading edge of any sector in science.
**Patrick Mahony**  
Science Writer, CSIRO Publishing

Patrick, a graduate of the Talented Student Program, writes about fun and interesting science for children, researching genetics one day and astrophysics another.

“The Talented Student Program drove home the importance of making science relevant to a wide range of audiences.”

**Michelle Mahon**  
Global Data Manager, Standard Media Index

Michelle Mahon’s experience in research design and statistics during her psychology studies gave her the analytical mindset to succeed in a data-driven corporate world. Her skills took her to New York leading a global team of data managers.

**Be the best**

The Faculty of Science has a long history of inspiring the best and brightest minds. For more than 20 years, our flagship Talented Student Program has been nurturing the curiosity of our highest calibre students with independent research projects from the beginning of their degree.

The 1600 exceptional students who have graduated from this program have benefited from challenging material, one-on-one mentoring from our scientists and conducting real-world research from the very beginning of their degree.

**Future forward**

A science degree from the University of Sydney is your key to unlocking a world of opportunity. More than preparing you for a career in science, your skills in researching complex topics, thinking critically, analysing data and writing reports will make you highly sought after by employers.

Our graduates have gone on to work for biotechnology companies, financial institutions, law firms, consulting groups, education organisations, the media, and many, many more.
Study

Engineering and Information Technologies

As one of the top 50 engineering and technology universities in the world, we will provide you with the skills to develop innovative, creative and sustainable solutions that promote positive change worldwide.

Clear pathways, widest choice
Our engineering degree options cover aeronautical, mechanical, mechatronic, biomedical, chemical and biomolecular, civil, electrical, and software engineering. With more than 15 majors, you have the option to personalise your degree. You can broaden your career options even further by combining your degree with studies in arts, law, architecture, science, commerce, music or medical science.

A career in engineering could take you anywhere, from developing space robotics to designing offshore pipelines, integrating renewable energy into our power supply, improving pharmaceutical delivery, managing construction of critical infrastructure or developing software.

Technical skills, business knowledge
Our Bachelor of IT and Bachelor of Computer Science and Technology degrees prepare you to become a professional at the forefront of information technology. You will study a number of core subjects before choosing one of two streams – computer science or information systems. And when you graduate you could play an important role in helping businesses build infrastructure, develop products, manage data, analyse trends, strategise and conduct research.

We know that employers want well-rounded individuals who embrace all the opportunities and challenges that come their way. That’s why we work with hundreds of organisations to support you through leadership development programs, scholarships, international exchange, vacation work and industry-sponsored projects.

Our engineering degrees are accredited by Engineers Australia and our IT degrees by the Australian Computer Society. So, whatever your specialty, you will graduate with a prestigious qualification that is recognised worldwide.

“In high school I realised that I wanted to pursue a career in engineering. During my degree, I undertook an internship then an industry placement scholarship with Qantas. After graduation, Qantas offered me a position as an aircraft performance analyst.”

Satveer Singh
Aeronautical Engineering graduate
Sasha and Jenna Bermeister

Sasha (pictured left) took up a software engineering role at Google after finishing a Bachelor of IT (Honours) in Computer Science. She is one of online-venture builder Pollenizer’s top 50 women programmers in Australia.

Studying a Bachelor of Computer Science and Technology, her sister Jenna leads a team collaborating with San Franciscan start-up Meta. Not only is she the University’s Google Student Ambassador and president of the IT Society, in 2014, she led a team that tied for first prize in the inaugural Telstra M2M University Challenge.

“The lecturers here are the best I’ve ever come across,” she says. “They are so passionate about what they do, and it’s incredible to hear about all their experiences – you can really feel the enthusiasm. I think it inspires people to go beyond their degree and become leaders themselves.”
Study
Project Management

Project managers help organisations deliver new products, services and infrastructure. They manage and implement new systems and processes and effect change within companies.

Project management skills and methods can be applied to a variety of organisational and humanitarian situations, including disease and disaster recovery scenarios that require an innovative and dynamic approach.

Project management is a highly regarded discipline. ‘On-the-job’ training often fails to meet the needs of organisations or provide the fundamental skills required to manage big projects in a complex environment.

Unique and unequalled
This degree is unlike any other project management course in Australia. We take a complex systems approach to investigate projects from a holistic viewpoint.

It will provide you with skills that you can apply across any industry. Core subjects include project management, project finance, complex project coordination, analytics, statistics, risk management, organisational behaviour and psychology.

These subjects are integrated with units of study from your chosen stream from the start of your studies:
- Civil Engineering Science
- Built Environment
- Software.

This degree is an ideal complement to a Bachelor of Engineering or a Bachelor of Arts.

Industry oriented
Career opportunities are varied because project management skills are transferable across industries. Graduates will be highly sought after and could work in professional and management roles in property development, construction, mining, IT, banking and finance, not-for-profit organisations, or state or federal government. They can also work in consultancy roles in the engineering, water, health or energy sectors.

“Combined with my engineering degree, my project management studies will open more doors, fast-tracking my career and the projects I can work on. This degree will create so many more career opportunities, more variety and a better understanding of the industry.”

Dana King
Bachelor of Engineering (Aeronautical) and Bachelor of Project Management (Civil Engineering Science)
Since our founding in 1910, Australia’s premier Faculty of Veterinary Science, ranked first in Australia and 11th in the world in the latest QS rankings, has been providing the nation’s best training in the health and conservation of animals.

A whole new way to train to be a vet
We’re more than Australia’s top-ranked and longest continuously operating veterinary faculty. We’re making sure this outstanding education is fit for the future. We are proud to offer a new curriculum designed to give you the best preparation possible for embarking on a career as a vet.

With our new, six-year degree – the Bachelor of Veterinary Biology/Doctor of Veterinary Medicine – we’ve turned traditional teaching on its head. In the first and second years of the degree, you will learn the fundamentals in an integrated, cross-subject manner that sets you up for understanding real-world situations. In years three to six, you’ll use your knowledge in clinical settings, and you will spend your final year doing internships in professional clinics.

A degree in veterinary science opens doors to many different careers beyond private practice. From sophisticated medicine and surgery across many animal species to public health, animal production, wildlife ecology or research, the options for a rewarding career in the veterinary profession are many and varied.

Other ways to work with animals
Contributing to the care, management and welfare of animals is one of the most fulfilling careers available – and you don’t have to become a veterinarian.

The Bachelor of Animal and Veterinary Bioscience is a highly practical degree covering all areas of animal sciences, such as health, nutrition, reproduction, behaviour and genetics. This industry-focused degree is your passport to working with animals.

You could work in pharmaceuticals, government services, zoos, artificial breeding, natural resource management, management of invasive animals, medical research, teaching at various levels in education, or working as an animal nutritionist – just to name a few.

“The University of Sydney veterinary hospital gives us the opportunity to get involved with actual veterinarians. We get to do physical examinations and to see cases that you normally wouldn’t see.”

Dennis Hitchen
Bachelor of Veterinary Science (now the Bachelor of Veterinary Biology/Doctor of Veterinary Medicine)

“Uni gave me an understanding of the scientific basis of a lot of things, and I have been able to build on this knowledge by applying it on-farm and in different areas of the country.”

Kiri Broad
Beef Extension Officer, Department of Agriculture and Fisheries (Queensland), Bachelor of Animal and Veterinary Bioscience graduate
Study
Why mathematics is more than just numbers

“Mathematics is the music with which the symphony of the universe is written. I mean it is everywhere! Maths underpins all the STEM areas, as well as lots of other areas such as business and music, and anywhere where you need to apply logic and solve problems.”

Adam Spencer
Mathematics and Science Ambassador,
the University of Sydney

The discipline of mathematics underpins all science, technology and engineering degrees. Majoring in mathematics can lead you to many exciting careers, including statistics, medical data analysis, air traffic control, artificial intelligence, pattern recognition, meteorology, economic forecasting and more.
Join us
Courses

Now that you’ve seen where you can go in the areas of science, technology, engineering and mathematics, you can think about choosing a course to start you on your journey. The table below lists the courses we offer and include brief descriptions. You can find more detail about our courses online at sydney.edu.au/courses.

If you are a domestic student and have any questions, please call our helpline on 1800 SYD UNI (1800 793 864) or visit sydney.edu.au/ask-domestic. International students can call us on +61 2 8627 1444 or visit sydney.edu.au/ask-international.

<table>
<thead>
<tr>
<th>Course name</th>
<th>Course description</th>
<th>Major studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agriculture and Environment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Environmental Systems</td>
<td>You will focus on the application of systems-thinking to major global issues, such as climate change, carbon emissions and water and food security. You will learn how to manage environmental resources across natural and agricultural systems, and gain a thorough understanding of the physical, chemical and biological interactions. There is a huge international demand for well-trained environmental scientists.</td>
<td>Agricultural systems including agronomy, agro-forestry, biosphere-atmosphere interactions, hydrology, international specialisation, plant pathology, plant science, soil science, spatial information systems; natural terrestrial systems including biogeochemistry, ecology, environmetrics, fluvial systems, geomorphology and hydrology.</td>
</tr>
<tr>
<td>3 years full time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Food and Agribusiness</td>
<td>You will learn about the business and science aspects of supplying affordable, nutritious food to an ever-growing global population. This four-year program includes an embedded honours year and industry placement internship. This is a booming area and, as a recent Deloitte report stated, there are now vastly more agribusiness jobs than qualified graduates.</td>
<td>Agribusiness including agricultural trade, business, human resource management, international specialisation, marketing, quality assurance, retail, supply chain management, transport logistics, value adding; food science including food biochemistry, food safety and packaging, global food security, microbiology, post-harvest and product development.</td>
</tr>
<tr>
<td>4 years full time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Science in Agriculture</td>
<td>How we will feed the world is one of the greatest challenges society faces today. You will have the opportunity to develop a foundation in science with an emphasis on how it applies to managing food production and sustainable use of natural resources. You will develop strong skills in critical thinking, problem solving, research and communication. Highlighting the connectivity and dynamics of agricultural systems, you will learn how to apply the principles of science to solutions-based management.</td>
<td>Agricultural chemistry, agricultural economics, agricultural genetics, agronomy, animal production, entomology, environmetrics, farming systems, food science, forest science, horticulture, hydrology, international specialisation and soil science.</td>
</tr>
<tr>
<td>4 years full time</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Engineering and Information Technologies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Computer Science and Technology</td>
<td>This degree will prepare you to work at the cutting edge of information technology. We develop your skills so that you can become an IT specialist and possess an excellent combination of knowledge and practical, hands-on expertise to influence and reinforce an organisation’s technology infrastructure and to support the people who use it.</td>
<td>Computer science, databases, group project, information systems, mathematics, professional technology skills, programming, systems analysis. Electives include artificial intelligence, e-business analysis and design, graphics, human-computer interaction, internet software platforms, networking and object-oriented design. You may also take electives from other faculties within the University.</td>
</tr>
<tr>
<td>3 years full time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Computer Science and Technology (Advanced)</td>
<td>This degree is for applicants with substantial programming aptitude and experience. You will choose units of study from a wide range of areas including networking, human-computer interaction, graphics, object-oriented design, internet software platforms, artificial intelligence and e-business analysis and design.</td>
<td>See B Computer Science and Technology, but with study at an advanced level.</td>
</tr>
<tr>
<td>3 years full time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Design Computing</td>
<td>The Bachelor of Design Computing teaches you to bring ideas into reality. Using software and digital devices, you will be taught ideation – the ability to conceptualise, problem solve and judge various design solutions. You will then be trained in implementation: taking these ideas and producing working prototypes, systems and products. You will work in a studio-based model that teaches you to recognise which tools you need for specific challenges and how best to use those skills and tools. This is the only program in the Asia-Pacific region that gives you this combination of design skills and training in ideation, programming, interaction and user experience.</td>
<td>Creative computer programming, design thinking, digital design, human-computer interaction, interaction design, modelling, physical computing and app design, user-centred design. Other related units and majors may be taken from fields including arts and social sciences, business, engineering and science. Students interested in extending their information technology skills may also take senior units offered by the School of Information Technologies.</td>
</tr>
<tr>
<td>3 years full time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please note that we use the abbreviation ‘B’ for ‘Bachelor of’ and ‘D’ for ‘Doctor of’ throughout these course tables.
### Join us
Courses (continued)

<table>
<thead>
<tr>
<th>Course name</th>
<th>Course description</th>
<th>Major studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B Engineering Honours – Flexible First Year Program</strong>&lt;br&gt;4 years full time</td>
<td>This program gives you the time and flexibility to discover where your strengths lie before deciding on a stream. You will start your studies with core subjects and transfer at the end of your first semester or at the end of your first year into your stream of choice. You will still complete your engineering or IT degree in the normal time and be a fully qualified graduate in your chosen discipline.</td>
<td>Refer to the relevant stream.</td>
</tr>
<tr>
<td><strong>B Engineering Honours (Aeronautical)</strong>&lt;br&gt;4 years full time</td>
<td>Aeronautical engineering focuses on the development and operation of aircraft – from design and manufacture to maintenance and operation – both within the Earth’s atmosphere and in space. There is a strong emphasis on hands-on learning throughout the degree program, including elementary flying experience. Aeronautical engineering is an international industry, so you will have a wide choice of career opportunities and can practise in almost any country.</td>
<td>We offer space engineering as a major within the aeronautical, mechanical and mechatronic degree programs. The space engineering major at the University is the only one of its kind in Australia, combining an in-depth understanding of the space environment with space and aeronautical engineering fundamentals and hands-on experience.</td>
</tr>
<tr>
<td><strong>B Engineering Honours (Biomedical)</strong>&lt;br&gt;4 years full time</td>
<td>Biomedical engineers are involved in designing artificial joints and limbs, dental devices, medical electronics and implantable devices, as well as tissue engineering and computer simulation such as MRI, X-ray and CT scans. The study of biomedical engineering complements degrees in commerce, sports science, law, pharmacy, dentistry and medicine. Many students go on to undertake graduate medical studies. Biomedical engineering is one of the fastest growing branches of engineering and employment opportunities are wide ranging.</td>
<td>Chemical and biomolecular engineering, electrical engineering, information technology, mechanical engineering or mechatronic engineering.</td>
</tr>
<tr>
<td><strong>B Engineering Honours (Chemical and Biomolecular)</strong>&lt;br&gt;4 years full time</td>
<td>By studying chemical and biomolecular engineering you will learn to develop creative solutions in the areas of chemical, combustion, environmental, petroleum and water engineering. You will explore how to transform raw materials into useful products using chemistry, biology and physics. Your studies will also include the newer fields of nanotechnology and molecular biology that are revolutionising the energy and storage systems, food production and healthcare industries.</td>
<td>There are no specific majors aligned with this degree. You may choose additional units of study if you wish to major in a particular area of engineering.</td>
</tr>
<tr>
<td><strong>B Engineering Honours (Civil)</strong>&lt;br&gt;4 years full time</td>
<td>Civil engineers play a vital role in the management, design and construction of crucial modern infrastructure such as buildings, roads, railways, bridges, tunnels, dams and ports as well as systems for managing water, irrigation, sewage and floodwaters. As a civil engineer, you can take a lead role in sustainable development across all these areas. Your core units of study will enable you to master the foundations of civil engineering before specialising in your chosen major.</td>
<td>Construction management, environmental engineering, geotechnical engineering, transport engineering and structures.</td>
</tr>
<tr>
<td><strong>B Engineering Honours (Civil)/ B Design in Architecture</strong>&lt;br&gt;5 years full time</td>
<td>This combined degree offers you the opportunity to study both civil engineering and architectural design simultaneously over five years. Your engineering studies will teach you to analyse the forces within a structure and to design its skeleton to support these forces, while your architectural studies will emphasise the conceptual and aesthetic aspects of the design process.</td>
<td>Refer to B Engineering Honours (Civil) above and B Design in Architecture in the architecture, interaction design, music and visual arts undergraduate guide or see sydney.edu.au/courses</td>
</tr>
<tr>
<td><strong>B Engineering Honours (Electrical)</strong>&lt;br&gt;4 years full time</td>
<td>Electrical engineers provide solutions to many of the world’s biggest challenges in health, education and the environment. Their work in communications, computing, power, information access, control systems and other fields has helped improve the lives of many people. The degree includes foundations in physics, mathematics, computer science and basic electrical engineering principles, on which further studies in electrical circuits, electronics and computer systems, signals and communications, and power and energy systems are based.</td>
<td>Computer engineering, power engineering and telecommunications engineering.</td>
</tr>
<tr>
<td><strong>B Engineering Honours (Mechanical)</strong>&lt;br&gt;4 years full time</td>
<td>There are a number of diverse applications for mechanical engineers and this degree covers all aspects of mechanical engineering including power generation, transport, building services, machinery, manufacturing, computer-aided design (CAD), advanced materials and environmental studies.</td>
<td>Materials and space engineering. We offer space engineering as a major within the aeronautical, mechanical and mechatronic degree programs. The space engineering major at the University is the only one of its kind in Australia combining an in-depth understanding of the space environment with space and mechanical engineering fundamentals.</td>
</tr>
</tbody>
</table>
Please note that we use the abbreviation 'B' for 'Bachelor of' and 'D' for 'Doctor of' throughout these course tables.
### B Engineering Honours/ B Science

5 years full time

This combined degree program is well established, and emphasises the strong scientific foundations of engineering. The Bachelor of Engineering Honours emphasises specific practical aspects of science and technology, while the Bachelor of Science emphasises fundamental scientific principles. Combining the two degrees expands your career options in both fields. You can combine any of the Bachelor of Engineering Honours streams with a Bachelor of Science. In addition to your engineering stream, this program allows you to complete two majors in any area of science.

Students can take any engineering specialised stream as a component of a combined degree, provided their ATAR is above or equal to the cut-off for the specific engineering stream.

Refer to B Engineering Honours and B Science.

### B Information Technology

4 years full time

If you are technically minded and would like to contribute to the future development and support of technology, this is the degree for you. The degree offers two streams in computer science and information systems. This course has been developed in consultation with industry to offer a great deal of flexibility and the opportunity to undertake a major research project.

Computer science, databases, group project, information systems, mathematics, professional technology skills, programming, systems analysis. Electives include advanced data models, data mining, high-performance network computing knowledge management, mobile networking, multimedia storage and retrieval, natural language processing and software architecture. Electives may also be taken from other faculties within the University.

### B Information Technology/B Arts

5 years full time

This combined degree program extends the Bachelor of Information Technology to satisfy the increasing demand for employees with both an extensive technical understanding of IT and essential skills in disciplines from the humanities, languages and social sciences. You can combine any IT major with a Bachelor of Arts. The two IT majors are computer science and information systems.

Refer to B Information Technology, and B Arts in the Humanities and Social Sciences undergraduate guide or see sydney.edu.au/courses.

### B Information Technology/B Commerce

5 years full time

This combined degree program extends the management component of the Bachelor of Information Technology to satisfy the increasing demand for IT professionals with business skills. You can combine either of the IT majors with a Bachelor of Commerce. In addition to your IT specialisation, this program allows you to complete one major and one minor in any area of commerce. Some units of study are compulsory, including introductory commerce units in accounting, economics and econometrics.

Refer to B Information Technology, and B Commerce in the Business and Law undergraduate guide or see sydney.edu.au/courses.

### B Information Technology/B Laws

6 years full time

This six-year combined degree is an excellent foundation for a career in law or IT. The first three years are spent studying a combination of subjects from the engineering and law faculties. You will have the same flexibility to shape your IT studies as would be available in a single degree, but combined with foundation units in law. Year four focuses on IT. Years five and six are then spent completing the Bachelor of Laws at the Law School.

Refer to B Information Technology, and the B Laws in the Business and Law undergraduate guide or see sydney.edu.au/courses.

### B Information Technology/B Medical Science

5 years full time

This combined degree program is designed for people interested in spanning information technology and medical science in their future endeavours. Such multidisciplinary study will enable you to adapt to the changing needs of the profession.

Refer to B Information Technology, and B Medical Science.

### B Information Technology/B Science

5 years full time

This combined degree emphasises the natural synergy between information technology and science. All areas of science involve using information technology and many science graduates work in information technology. The program allows you to complete majors in two areas of science, chosen from biochemistry, biology, chemistry, computer science, geology, mathematics, physics and psychology.

Refer to B Information Technology, and B Science.
### Course description

Please note that we use the abbreviation ‘B’ for ‘Bachelor of’ and ‘D’ for ‘Doctor of’ throughout these course tables.

<table>
<thead>
<tr>
<th>Course name</th>
<th>Course description</th>
<th>Major studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mathematics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Education (Secondary: Mathematics)/B Science</td>
<td>The Bachelor of Education (Secondary: Mathematics) and Bachelor of Science will give you a strong practical and theoretical preparation for secondary school teaching in mathematics and science. The degree covers professional teaching, special education, international education, and information and communications technology. Science teaching areas on offer include biology, chemistry, earth and environmental science, geography, and physics.</td>
<td>You will follow a core program of study in education, along with intensive study and professional experience in teaching areas. You need to take a major in mathematics. A second teaching area can be taken in one of the following: biology, chemistry, earth and environmental science, geography or physics. If you intend to teach science at a secondary level, you need to complete at least one year of study in chemistry or physics during your degree.</td>
</tr>
<tr>
<td>B Science</td>
<td>The Bachelor of Science allows you the choice of 29 specialist majors in one degree. The extensive list of majors we offer encompasses all types of scientific endeavour, from the fundamental sciences of physics, chemistry, biology and mathematics, through to psychology, life sciences, sciences of the natural environment, interdisciplinary sciences, and history and philosophy of science. You will take at least one major and many students complete two. The course is flexible, allowing you to study up to one third of your course outside science.</td>
<td>Anatomy and histology, biochemistry, bioinformatics, biology (animal, plant and genetics), cell pathology, chemistry, computer science, environmental studies, financial mathematics and statistics, geography, geology and geophysics, history and philosophy of science, immunobiology, information systems, marine science, mathematics, medicinal chemistry, microbiology, molecular biology and genetics, nanoscience and technology, neuroscience, nutrition and metabolism, pharmacology, physics, psychology, plant science, psychology, soil science and statistics.</td>
</tr>
<tr>
<td>B Science (Advanced)</td>
<td>The advanced science degree retains much of the flexibility of the Bachelor of Science. Advanced units cater to the needs of the best students; the material taught is demanding and the results are extremely rewarding. Advanced units are available to you in many other programs including the Bachelor of Science, Bachelor of Science (Advanced Mathematics) and Bachelor of Liberal Arts and Science. You may also combine the Bachelor of Science (Advanced) with Arts, Commerce, Education, Engineering, Information Technology and Law.</td>
<td>Refer to B Science. Advanced majors include anatomy and histology, biochemistry, biology, chemistry, computer science, environmental studies, financial mathematics and statistics, geography, geology and geophysics, immunobiology, information systems, marine science, mathematics, medicinal chemistry, microbiology, nanoscience and technology, neuroscience, pharmacology, physics, physiology, plant science and statistics.</td>
</tr>
<tr>
<td>B Science (Advanced Mathematics)</td>
<td>This degree is similar in structure to both the Bachelor of Science and the Bachelor of Science (Advanced). This degree is for highly talented students who want to combine an interest in mathematics with some other area of science or technology. In this degree, you will study the majority of your mathematics material at the advanced level or as part of the Talented Student Program. You also have the opportunity to complement your study with other advanced science units of study and challenging units from other faculties.</td>
<td>Financial mathematics and statistics, mathematics, statistics. You may choose a second major from the Bachelor of Science or another faculty.</td>
</tr>
<tr>
<td><strong>Project Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Project Management</td>
<td>This program provides the fundamental project management skills, theories and methods required in today’s complex business environment. Subjects include project finance, statistics, analytics, risk management, organisational behaviour and psychology. Students choose a stream of civil engineering science, built environment or software. With project managers in high demand, graduates will be highly sought after.</td>
<td>No specific majors for this degree.</td>
</tr>
<tr>
<td>B Project Management/B Arts</td>
<td>This four-year combined degree will provide you with fundamental practical and behavioural project management skills. This unique combined degree program will equip you with the technical expertise and soft skills required to successfully manage projects. This will be complemented by the communication, research and critical thinking skills that are acquired from an arts degree. As a graduate from this combined degree program, you will be uniquely qualified with well-rounded skills that will enable you to work in a variety of organisations and across industries.</td>
<td>Arts major – refer to B Arts in the Humanities and Social Sciences undergraduate guide or see sydney.edu.au/courses.</td>
</tr>
<tr>
<td>B Engineering Honours/B Project Management</td>
<td>This combined degree provides students with a solid foundation and complementary skills in engineering and project management. Designed in consultation with industry, graduates of this combined degree will be highly sought after due to their ability to understand and grasp the various aspects of project management more quickly than they would with ‘on the job’ training. You can combine any of the Bachelor of Engineering Honours streams with a Bachelor of Project Management.</td>
<td>Refer to B Engineering Honours, and B Project Management. Students can take any engineering specialised stream as a component of a combined degree, provided their ATAR is above or equal to the cut-off for the specific engineering stream.</td>
</tr>
</tbody>
</table>

Join us
## Join us

### Courses (continued)

<table>
<thead>
<tr>
<th>Course name</th>
<th>Course description</th>
<th>Major studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Science</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Commerce/ B Science</td>
<td>If you want to gain scientific skills as well as the management skills necessary to pursue an interesting career in the private or public sector, this combined degree will appeal. Many industries and organisations value both scientific and business skills, such as in the pharmaceutical industry and commercialisation of scientific innovations, and this degree will give you the edge in roles that require a sound understanding of both perspectives.</td>
<td>Refer to B Science, and B Commerce in the Business and Law undergraduate guide or see sydney.edu.au/courses.</td>
</tr>
<tr>
<td><strong>Education (Secondary: Science)/ B Science</strong></td>
<td>The Bachelor of Education (Secondary: Science) and Bachelor of Science will give you a strong practical and theoretical preparation for teaching science at secondary school. The degree covers professional teaching, special education, international education, and information and communications technology. Science teaching areas on offer include biology, chemistry, earth and environmental science, geography and physics.</td>
<td>You will follow a core program of study in education, along with intensive study and professional experience in teaching areas. You will select two teaching areas from: biology, chemistry, earth and environmental science, geography, mathematics and physics, and a major in a science teaching area. Graduates intending to teach science at a secondary level need to complete one year of study in mathematics and at least one year of study in chemistry or physics during their degree. Not all units of study offered by the Faculty of Science directly relate to the teaching of science in the school system. You will need to seek enrolment advice to ensure your choice of subjects meets the requirements of the NSW Institute of Teachers.</td>
</tr>
<tr>
<td><strong>B Liberal Arts and Science</strong></td>
<td>This degree is designed to provide you with a background in both the humanities and the sciences. You will also develop communication and analytical skills through the liberal studies stream, identified by potential employers as desirable in a wide range of careers. The degree gives you flexibility and breadth of subject choice.</td>
<td>You need to choose at least one major from the major studies listed in B Arts in the Arts and Humanities undergraduate guide or B Science (see also sydney.edu.au/courses). You also need to take a sequence of subjects in science (if you choose an arts major), or in arts (if you choose a science major), and a sequence in the liberal studies stream.</td>
</tr>
<tr>
<td><strong>B Medical Science (First-year Entry)</strong></td>
<td>The Bachelor of Medical Science will give you an understanding of the structure and function of the human body, from molecules to whole systems. You will also be introduced to aspects of abnormal functioning. Schools in the Faculty of Science teach the basic sciences: physics, chemistry, biology, psychology, microbiology, nutrition and biochemistry. A unique feature of the degree is that the Sydney Medical School teaches the clinical sciences: anatomy, pathology, physiology, pharmacology, infectious diseases and immunology. You will have the opportunity to complete an honours year in one of these disciplines.</td>
<td>Anatomy and histology, biochemistry, cell pathology, immunology, microbiology, molecular biology and genetics, neuroscience, nutrition and metabolism, pharmacology and physiology. Refer to B Science for additional science majors.</td>
</tr>
<tr>
<td><strong>B Medical Science/ D Medicine</strong></td>
<td>The Faculty of Science and Sydney Medical School offer high-achieving school leavers the opportunity to get a strong foundation in the sciences through the Bachelor of Medical Science followed by the University’s prestigious four-year graduate Doctor of Medicine (MD) program.</td>
<td>Refer to B Medical Science (first-year entry), and the Faculty of Science handbook. All B Medical Science students need to take some study in biology, chemistry and psychology and/or physics. Practical experience: contact with patients and observation of the physical aspects of disease commences in the first year of the Doctor of Medicine and continues to the final year.</td>
</tr>
<tr>
<td><strong>B Psychology</strong></td>
<td>The Bachelor of Psychology is a specialised degree with both an arts and science stream. The arts stream caters for students whose interests lie in the humanities and social sciences, while the science stream will cater for those who have science-oriented interests. If you are interested in both the arts and sciences, there is room in both streams to undertake a small number of elective units in subject areas other than the one in which you enrolled. The psychology subjects you study are identical for both streams.</td>
<td>For Science stream major: psychology. For Arts stream: arts major in the Humanities and Social Sciences undergraduate guide or see sydney.edu.au/courses.</td>
</tr>
<tr>
<td><strong>B Science</strong></td>
<td>The Bachelor of Science allows you the choice of 29 specialist majors in one degree. The extensive list of majors we offer encompasses all types of scientific endeavour, from the fundamental sciences of physics, chemistry, biology and mathematics, through to psychology, life sciences, sciences of the natural environment, interdisciplinary sciences, and history and philosophy of science. You will take at least one major and many students complete two. The course is flexible, allowing you to study up to one third of your course outside science.</td>
<td>Anatomy and histology, biochemistry, bioinformatics, biology (animal, plant and genetics), cell pathology, chemistry, computer science, environmental studies, financial mathematics and statistics, geography, geology and geophysics, history and philosophy of science, immunobiology, information systems, marine science, mathematics, medicinal chemistry, microbiology, molecular biology and genetics, nanoscience and technology, neuroscience, nutrition and metabolism, pharmacology, physics, physiology, plant science, psychology, soil science and statistics.</td>
</tr>
</tbody>
</table>
### Major studies

<table>
<thead>
<tr>
<th>Course name</th>
<th>Course description</th>
<th>Major studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B Science (Advanced)</strong></td>
<td>The advanced science degree retains much of the flexibility of the Bachelor of Science. Advanced units cater to the needs of the best students; those taught is demanding and the results are extremely rewarding. Advanced units are available to you in many other programs including the Bachelor of Science, Bachelor of Science (Advanced Mathematics) and Bachelor of Liberal Arts and Science. You may also combine the Bachelor of Science (Advanced) with Arts, Commerce, Education, Engineering, Information Technology and Law.</td>
<td>Refer to B Science. Advanced majors include anatomy and histology, biochemistry, biology, chemistry, computer science, environmental studies, finance, mathematics and statistics, geography, geology and geophysics, immunology, information systems, marine science, mathematics, medicinal chemistry, microbiology, nanoscience and technology, neuroscience, pharmacology, physics, physiology, plant biology, plant science and statistics.</td>
</tr>
<tr>
<td><strong>B Science (Advanced) Mathematics</strong></td>
<td>This degree is similar in structure to both the Bachelor of Science and the Bachelor of Science (Advanced). This degree is for you if you are a highly talented student who wants to combine your interest in mathematics with some other area of science or technology. In this degree, you will study the majority of your mathematics material at the advanced level or as part of the Talented Student Program. You also have the opportunity to complement your study with other advanced science units of study and challenging units from other faculties.</td>
<td>Financial mathematics and statistics, mathematics, statistics. You may choose a second major from the Bachelor of Science or another faculty.</td>
</tr>
<tr>
<td><strong>B Science (Advanced)/D Dental Medicine</strong></td>
<td>The Faculty of Science and the Faculty of Dentistry offer high-achieving school leavers the opportunity to receive a strong foundation in the sciences through the Bachelor of Science (Advanced) followed by the University’s prestigious four-year graduate Doctor of Dental Medicine program.</td>
<td>For B Science (Advanced): anatomy and histology, biochemistry, biology, chemistry, computer science, environmental studies, financial mathematics and statistics, geography, geology and geophysics, immunology, information systems, marine science, mathematics, medicinal chemistry, microbiology, nanoscience and technology, neuroscience, pharmacology, physics, physiology, plant science and statistics. All students undertake studies in biology. For more details, see B Science (Advanced). For Doctor of Dental Medicine: clinical dentistry, life sciences and a research project.</td>
</tr>
<tr>
<td><strong>B Science (Advanced)/D Medicine</strong></td>
<td>The Faculty of Science and Sydney Medical School offer high-achieving school leavers the opportunity to receive a strong foundation in the sciences through the Bachelor of Science (Advanced) followed by the University’s prestigious four-year graduate Doctor of Medicine (MD) program. This particular degree is only available to Aboriginal and Torres Strait Islander applicants.</td>
<td>Refer to B Science (Advanced) and the Faculty of Science handbook. Practical experience: contact with patients and observation of the physical aspects of disease commences in the first year of the Doctor of Medicine and continues to the final year.</td>
</tr>
<tr>
<td><strong>B Science (Advanced)/D Medicine (for Aboriginal and Torres Strait Islander applicants only)</strong></td>
<td>The Faculty of Science and Sydney Medical School offer high-achieving school leavers the opportunity to receive a strong foundation in the sciences through the Bachelor of Science (Advanced) followed by the University’s prestigious four-year graduate Doctor of Medicine (MD) program. This particular degree is only available to Aboriginal and Torres Strait Islander applicants.</td>
<td>Refer to B Science (Advanced) and the Faculty of Science handbook or see sydney.edu.au/courses. Practical experience: contact with patients and observation of the physical aspects of disease commences in the first year of the Doctor of Medicine and continues to the final year.</td>
</tr>
<tr>
<td><strong>B Science (Advanced)/B Laws</strong></td>
<td>The Science/Law combination allows you to complete the advanced degree with Law. You will spend the first three years studying a combination of subjects from the science and law faculties. You will have the same flexibility to shape your science studies as would be available in a single degree, but combined with foundation units in law. You then spend years four and five completing the Bachelor of Laws at Sydney Law School.</td>
<td>Refer to B Science (Advanced). For law majors, refer to the Business and Law undergraduate guide or see sydney.edu.au/courses.</td>
</tr>
<tr>
<td><strong>B Science/B Arts</strong></td>
<td>The Bachelor of Science/Bachelor of Arts degree can offer you either a general, vocationally oriented degree or a more specific professional pathway. There are many possible combinations of majors in the combined program, allowing you to pursue broad interests, while preparing for a wide range of careers. This combined program is an ideal choice for all-rounders.</td>
<td>Refer to B Science. For arts majors refer to the Humanities and Social Sciences undergraduate guide or see sydney.edu.au/courses.</td>
</tr>
<tr>
<td><strong>B Science/B Laws</strong></td>
<td>The Science/Law combination allows you to select from up to 29 specialist majors in science alongside law. The Faculty of Science also offers you the opportunity to choose from either the Bachelor of Science or the Bachelor of Science (Advanced) degrees. You will spend the first three years studying a combination of subjects from the science and law faculties. You will have the same flexibility to shape your science studies as would be available in a single degree, but combined with foundation units in law. Years four and five are then spent completing the Bachelor of Laws at the Law School.</td>
<td>Refer to B Science. For law majors, refer to Business and Law undergraduate guide or see sydney.edu.au/courses.</td>
</tr>
</tbody>
</table>

Please note that we use the abbreviation ‘B’ for ‘Bachelor of’ and ‘D’ for ‘Doctor of’ throughout these course tables.
### Join us

#### Courses (continued)

<table>
<thead>
<tr>
<th>Course name</th>
<th>Course description</th>
<th>Major studies</th>
</tr>
</thead>
</table>
| B Science/  
M Nursing | Designed for students who want to develop a deeper understanding in an area of science and apply it to their knowledge of nursing. Students can choose from 29 areas of science, including biology, chemistry, nutrition and metabolism, pharmacology, psychology and more. | For Science: refer to B Science. For nursing: acute care, aged care, child and adolescent health, chronic illness, clinical practice, Indigenous health, mental healthcare and management, pharmacology, physiology, professional practice, and social and health policy. |
| 4 years full time | | |
| B Science/  
M Nutrition and Dietetics | This program is designed to give you a solid knowledge of nutritional science and nutrition as a scientific discipline, and to make you a scientist capable of working in and furthering this emerging field. This degree will prepare you to lead in the dietetics profession, and maintain and advance the profession's standards. There are a limited number of places available in this degree. | For B Science: students need to complete a major in one of biochemistry, microbiology, nutrition and metabolism, physiology or psychology. You may choose a second major from the B Science. A credit grade point average in B Science is necessary for progression into M Nutrition and Dietetics. For M Nutrition and Dietetics: clinical nutrition, nutritional science and public health nutrition. |
| 5 years full time | | |
| B Engineering Honours/  
B Medical Science | This combined degree program encompasses the core elements of the engineering and medical science degrees, and is designed for people interested in spanning both engineering and medical sciences in their future endeavours. Such multidisciplinary study will enable you to adapt to the changing needs of the profession. This program is an ideal base for postgraduate research in the biomedical field, or for vocational graduate coursework programs such as medicine or dentistry. You can combine any of the Bachelor of Engineering Honours streams with a Bachelor of Medical Science. | Refer to B Engineering Honours and B Medical Science. Students can take any engineering specialised stream as a component of a combined degree, provided their ATAR is above or equal to the cut-off for the specific engineering stream. |
| 5 years full time | | |
| B Engineering Honours/  
B Science | This combined degree program is well established, and emphasises the strong scientific foundations of engineering. The Bachelor of Engineering Honours emphasises specific practical aspects of science and technology, while the Bachelor of Science emphasises fundamental scientific principles. Combining the two degrees expands your career options in both fields. You can combine any of the Bachelor of Engineering Honours streams with a Bachelor of Science. In addition to your engineering stream, this program allows you to complete two majors in any area of science. | Refer to B Engineering Honours and B Science. Students can take any engineering specialised stream as a component of a combined degree, provided their ATAR is above or equal to the cut-off for the specific engineering stream. |
| 5 years full time | | |
| B Information Technology/  
B Medical Science | This combined degree program is designed for people interested in spanning both information technology and medical science in their future endeavours. Such multidisciplinary study will enable you to adapt to the changing needs of the profession. | Refer to B Information Technology and B Medical Science. |
| 5 years full time | | |
| B Information Technology/  
B Science | This combined degree emphasises the natural synergy between information technology and science. All areas of science involve using information technology, and many science graduates work in information technology. The program allows you to complete majors in two areas of science, chosen from biochemistry, biology, chemistry, computer science, geology, mathematics, physics and psychology. | Refer to B Information Technology and B Science. |
| 5 years full time | | |

### Veterinary and Animal Science

<table>
<thead>
<tr>
<th>Course name</th>
<th>Course description</th>
<th>Major studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Animal and Veterinary Bioscience</td>
<td>The Bachelor of Animal and Veterinary Bioscience is a flexible applied science program that allows students to tailor their degree to their specific interests, within the field of animal science. This degree provides an excellent pathway if you are seeking a professional career working with animals. You will be highly employable across a wide range of industries, in agribusiness, government, research, biomedical science, development, management and teaching.</td>
<td>One major may be taken from: animal genetics and biotechnology, animal health and disease, animal production systems or wildlife conservation and management. Additional studies include: animal behaviour, animal genetics and biotechnology, animal health and diseases, animal nutrition, animal production and husbandry, animal reproduction, animal structure and function, animal welfare, aquaculture, cattle, pig, poultry and sheep science and production.</td>
</tr>
<tr>
<td>4 years full time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| B Veterinary Biology/  
B Veterinary Medicine | Our globally accredited six-year degree will provide you with the knowledge, practical and generic skills to pursue many career options as a veterinary scientist participating in the care and welfare of animals. During this degree you will work with veterinarians in a clinical teaching and learning environment. | Animal behaviour and welfare science, animal diseases and pathobiology, animal husbandry, cell biology, clinical and professional practice, pharmacology, veterinary anatomy and physiology, veterinary conservation biology, veterinary medicine, veterinary public health and veterinary surgery. |
| 6 years full time | | |
## Bachelor of Engineering Honours (Civil) – Major: Construction Management

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>Semester 2</td>
<td>Semester 1</td>
<td>Semester 2</td>
</tr>
<tr>
<td>Civil Core</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Civil Core</td>
<td>Civil Core</td>
<td>Civil Core</td>
<td>Civil Core</td>
</tr>
<tr>
<td>Engineering Core</td>
<td>Engineering Core</td>
<td>Civil Core</td>
<td>Civil Core</td>
</tr>
<tr>
<td>Engineering Core</td>
<td>Civil Core</td>
<td>Civil Core</td>
<td>Civil Core</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>Civil Core</td>
<td>Civil Core</td>
<td>Engineering Core</td>
</tr>
<tr>
<td></td>
<td>Engineering Core</td>
<td>Civil Core</td>
<td>Engineering Core</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engineering Core</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Engineering Core</td>
</tr>
</tbody>
</table>

- **Semester 1**: Civil Core
- **Semester 2**: Civil Core
- **Year 1**: Engineering Core
- **Year 2**: Engineering Core
- **Year 3**: Civil Core
- **Year 4**: Civil Core
- **Year 4**: Engineering Core

24 credit points 24 credit points 24 credit points 24 credit points

## Bachelor of Science

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>Semester 2</td>
<td>Semester 1</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Mathematics</td>
<td>Major 1 Intermediate Unit</td>
</tr>
<tr>
<td>Junior Science</td>
<td>Junior Science</td>
<td>Major 1 Intermediate Unit</td>
</tr>
<tr>
<td>Elective 1</td>
<td>Elective 1</td>
<td>Major 1 Intermediate Unit</td>
</tr>
<tr>
<td>Junior Science</td>
<td>Intermediate Science Elective</td>
<td>Major 2 or Elective</td>
</tr>
<tr>
<td>Elective 2</td>
<td>Elective</td>
<td>Intermediate or Senior Elective</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>Major 2 or Elective</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Major 2 or Elective</td>
</tr>
</tbody>
</table>

- **Year 2**: Junior Science Intermediate Unit or Elective
- **Year 3**: Intermediate or Senior Elective
- **Year 4**: Major 2 or Elective

24 credit points 24 credit points 24 credit points

## Bachelor of Food and Agribusiness

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>Semester 2</td>
<td>Semester 2</td>
<td>Semester 1</td>
</tr>
<tr>
<td>Business</td>
<td>Agricultural Economics</td>
<td>Corporate Finance</td>
<td>Food Security</td>
</tr>
<tr>
<td>Biology</td>
<td>Biology</td>
<td>Plant Function</td>
<td>Microbiology</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chemistry</td>
<td>Produce Management</td>
<td>Animal Management</td>
</tr>
<tr>
<td>Statistics</td>
<td>Accounting</td>
<td>Business Environment</td>
<td>Food Supply Chain Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Business Elective</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Internship</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elective</td>
</tr>
</tbody>
</table>

- **Year 2**: Agricultural Economics
- **Year 3**: Corporate Finance
- **Year 4**: Food Security

24 credit points
Join us
How to apply: domestic students

Step 1: Choose your course.
Step 2: Check the entry requirements of the course.
Step 3: Explore your entry options.
Step 4: Submit your application to UAC with the relevant documents.

Check the entry requirements
For most courses, entry is based on your ATAR (Australian Tertiary Admission Rank) or equivalent.

For details, visit our website:
- sydney.edu.au/ug-entry

Additional English language requirements can also apply. For more information refer to:
- sydney.edu.au/ug-int-english

Explore your entry options
Getting the ‘right’ ATAR is not the only way to obtain a place here. Access Sydney offers alternative entry pathways and you may be eligible to apply for more than one. Access Sydney is split into two categories: Year 12 schemes and post-high-school schemes, so you can see which option is right for you.

For more information about any of our schemes, visit:
- sydney.edu.au/access

Submit your application
As a domestic student, you need to submit your application online through the Universities Admissions Centre website:
- www.uac.edu.au

Visit us on Open Day
The best way to get a feel for the campus is to visit us on Open Day. Explore the campus, enjoy the atmosphere, and learn more about our courses and facilities by attending mini lectures, activities and tours.
- sydney.edu.au/openday
Join us
How to apply: international students

Step 1: Choose your course.
Step 2: Check the entry requirements of the course.
Step 3: Explore your entry options
Step 4: Submit your application online with the relevant documents.

Check the entry requirements
The University accepts a range of Australian and overseas senior secondary (high school) qualifications and successful tertiary studies for admission into its undergraduate courses. Applicants are required to meet course-specific academic requirements to secure admission, either through an accepted senior secondary qualification or at least one year of tertiary studies.

For a full list of accepted senior secondary qualifications, visit:
- sydney.edu.au/ug-int-qualifications

If your qualification isn’t recognised, you can complete one of the following:
- a university preparation course through the University of Sydney Foundation Program.
- one year of full-time study in a bachelor’s degree at a recognised tertiary institution, with required grades, or an equivalent tertiary qualification accepted by the University.

For more information about the undergraduate entry requirements for international students, visit:
- sydney.edu.au/ug-int-entry

English language requirements
As an international student, you need to demonstrate that your English language skills meet the minimum level required for your chosen course.

For details see:
- sydney.edu.au/ug-int-english

Submit your application
You can apply in the following ways:
- direct to the University
  sydney.edu.au/ug-int-apply
- through a University agent (representative)
  sydney.edu.au/ug-int-agents

If you are an international student studying an Australian/New Zealand senior secondary or International Baccalaureate qualification, you can apply online through the Universities Admissions Centre International website:
- uac.edu.au/international

Application deadlines
These vary by course. Check the specific closing date for your course at:
- sydney.edu.au/courses

We strongly encourage international applicants to apply as early as possible to allow time for visa and travel arrangements. Separate scholarship deadlines may apply.
Additional information
Are you a high achiever?

Students with outstanding academic ability can take advantage of several programs designed to inspire and challenge.

Science
Talented Student Program
Picture designing an instrument in your first year that can help cognitive rehabilitation, synthesising anticancer molecules in your second year and contributing to research that is published in a scientific journal in your third.

Designed for the highest calibre students, the Science Talented Student Program puts you straight into the lab or field to conduct real-world research from the very beginning of your degree. You’ll be paired with one of our scientists who will guide you on projects that challenge your mind and pique your curiosity. You’ll have opportunities to network, tailor-make your course and even fast-track your studies. You’ll be part of a group of like-minded colleagues sharing the same exciting journey.

Entry is by invitation from the Dean of Science, and is based on an Australian Tertiary Admission Rank (ATAR) of 99 or above and excellent results in HSC Science or Mathematics subjects.

Advanced units of study
The advanced program offers exceptional opportunities to budding scientists hungry for a challenge while still providing the flexibility of a typical degree. In the sciences, a major at an advanced level may mean undertaking independent research, solving in-depth problems, or attending extended lectures. This program will equip you with the skills to launch into postgraduate study or to work at the forefront of research anywhere in the world. You can take advanced subjects in any of our science degrees and, while this program caters to the very best students, you don’t need to be invited: anyone can study these units as long as they meet the academic criteria.

Honours
An extra year of study added to your undergraduate science or environmental systems degree, honours is what transforms you from a student into a researcher. The program’s focus on independent research allows you to see your own ideas through to completion, while turning you into a well-trained, critical and creative thinker.

An honours year allows you to pursue a question that deeply interests you, cultivate a strong relationship with an academic mentor, learn valuable research techniques and, above all, work independently.

You’ll master the skills of time and project management, critical thinking and writing – skills that will make you highly sought after by employers. We know that you are substantially more likely to get a job in your area of study after completing an honours year. So whether you want to be tomorrow’s scientist, innovator or leader, an honours year will help you the tools you need to get there.

Engineering and Information Technologies
Advanced Engineering and Talented IT Program
These programs are open to students demonstrating outstanding academic ability, with an ATAR of 97.5 or above for Advanced Engineering and 98 or above for the Talented IT program. They offer the opportunity to work at the advanced level in science, engineering or IT subjects, or in a small supervised project group tackling a specific engineering problem relevant to the community.

You will gain valuable insights into the processes of business planning, strategy development, assessment of a business proposition and financial planning.

Students need to apply for Advanced Engineering directly through the Universities Admissions Centre. Entry to the Talented IT program is by invitation from the Dean of Engineering and Information Technologies, following the release of the HSC results.

Honours
Our engineering degrees are classified as bachelor honours degrees. To graduate with honours, you need to meet the University requirements for honours degrees. If you don’t qualify for honours, you still graduate with a Bachelor of Engineering degree.
Throughout the year, we invite high school students to visit our campus to experience what it’s like to study science, agriculture, veterinary science, engineering, project management and information technologies.

You can participate in fun, interactive workshops, tour our facilities and talk to our current students about study options and life at Sydney. During the workshops you might create your own avatar, build a signal railway, do a DNA extraction, race in a fuel cell car challenge or participate in a project management desert-island scenario.

Our student ambassadors can also come to your school and run tailored activities with you and your classmates. For more information about campus or school visits, check out our website and speak with your science teacher or careers adviser.

- sydney.edu.au/science/outreach/high-school
- sydney.edu.au/engineering/high-school
Why study here?

As Australia’s first university our reputation spans more than 160 years. We are regularly ranked in the top 0.3 percent of universities worldwide. We teach more than 50,000 bright minds, with 10,000 international students from more than 145 countries. We’ve taught 145 Olympians, six prime ministers, two Nobel laureates, three astronauts, 110 Rhodes scholars and one Pulitzer Prize winner. What will you achieve?

When you come to study at the University of Sydney, you become part of an inspiring network of leading academics, and distinguished graduates and alumni. The cross-disciplinary nature of our 16 faculties allows us to offer the widest range of academic programs of any Australian university, giving you the flexibility to personalise your degree.

– sydney.edu.au/futurestudents

Domestic students
sydney.edu.au/ask-domestic
1800 SYD UNI (1800 793 864)

International students
sydney.edu.au/ask-international
+61 2 8627 1444 (outside Australia)